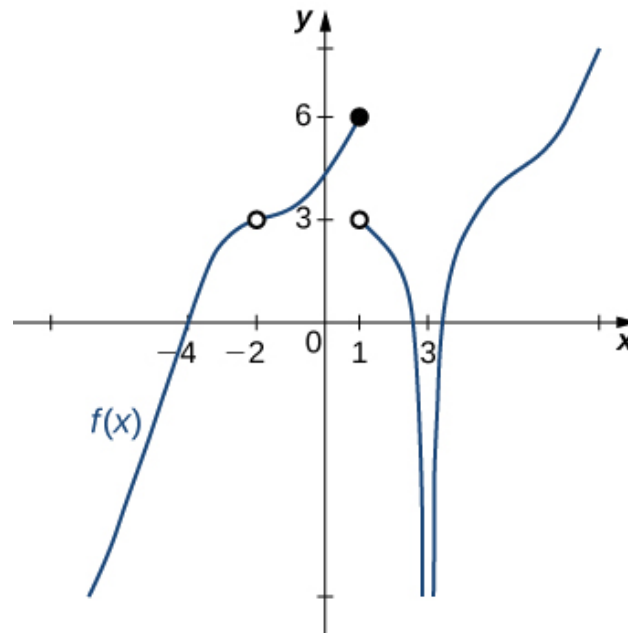


1. For the graph below, find the value(s) a that makes the statement true:
 $\lim_{x \rightarrow a} f(x)$ does not exist.



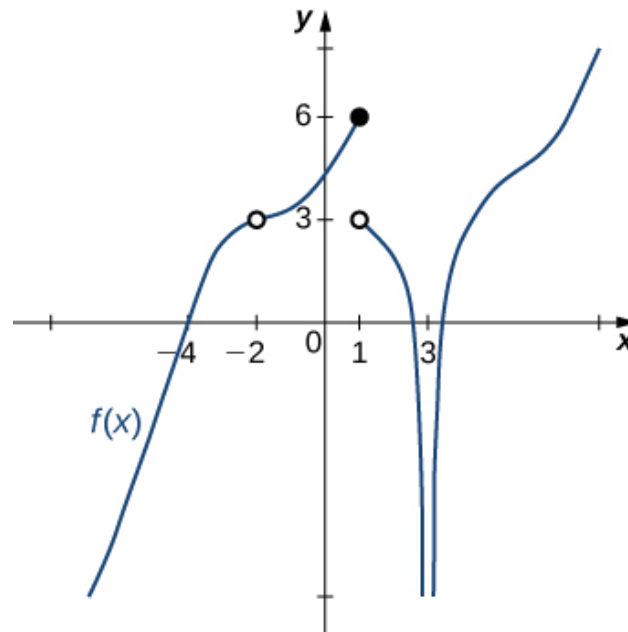
- A. 1
- B. 3
- C. -2
- D. Multiple a make the statement true.
- E. No a make the statement true.

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2. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \rightarrow -4^+} \frac{-8}{(x+4)^9} + 9$$

- A. ∞
- B. $-\infty$
- C. $f(-4)$
- D. The limit does not exist
- E. None of the above

3. For the graph below, find the value(s) a that makes the statement true:
 $\lim_{x \rightarrow a} f(x) = 0$.



- A. 3
B. 0
C. -4
D. Multiple a make the statement true.
E. No a make the statement true.
4. Based on the information below, which of the following statements is always true?

As x approaches 3, $f(x)$ approaches 13.108.

- A. $f(3) = 13$
B. $f(3)$ is close to or exactly 13
C. $f(13)$ is close to or exactly 3
D. $f(13) = 3$

E. None of the above are always true.

5. To estimate the one-sided limit of the function below as x approaches 5 from the right, which of the following sets of numbers should you use?

$$\frac{\frac{5}{x} - 1}{x - 5}$$

- A. {4.9000, 4.9900, 4.9990, 4.9999}
 - B. {5.0000, 4.9000, 4.9900, 4.9990}
 - C. {5.0000, 5.1000, 5.0100, 5.0010}
 - D. {5.1000, 5.0100, 5.0010, 5.0001}
 - E. {4.9000, 4.9900, 5.0100, 5.1000}
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6. Evaluate the limit below, if possible.

$$\lim_{x \rightarrow 7} \frac{\sqrt{8x - 40} - 4}{4x - 28}$$

- A. 0.125
 - B. 0.031
 - C. 0.707
 - D. ∞
 - E. None of the above
-

7. Evaluate the limit below, if possible.

$$\lim_{x \rightarrow 8} \frac{\sqrt{5x - 24} - 4}{6x - 48}$$

- A. 0.125
- B. 0.021

- C. ∞
 - D. 0.373
 - E. None of the above
-

8. Based on the information below, which of the following statements is always true?

As x approaches ∞ , $f(x)$ approaches 9.515.

- A. $f(x)$ is undefined when x is large enough.
 - B. x is undefined when $f(x)$ is large enough.
 - C. $f(x)$ is close to or exactly ∞ when x is large enough.
 - D. $f(x)$ is close to or exactly 9.515 when x is large enough.
 - E. None of the above are always true.
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9. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \rightarrow 2^-} \frac{-3}{(x-2)^6} + 5$$

- A. $-\infty$
 - B. ∞
 - C. $f(2)$
 - D. The limit does not exist
 - E. None of the above
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10. To estimate the one-sided limit of the function below as x approaches 5 from the left, which of the following sets of numbers should you use?

$$\frac{\frac{5}{x} - 1}{x - 5}$$

- A. $\{5.1000, 5.0100, 5.0010, 5.0001\}$

- B. $\{5.0000, 5.1000, 5.0100, 5.0010\}$
 - C. $\{4.9000, 4.9900, 5.0100, 5.1000\}$
 - D. $\{5.0000, 4.9000, 4.9900, 4.9990\}$
 - E. $\{4.9000, 4.9900, 4.9990, 4.9999\}$
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